INCH-POUND

MIL-T-27/265A
13 March 1991
SUPERSEDING
MIL-T-27/265
7 MARCH 1979

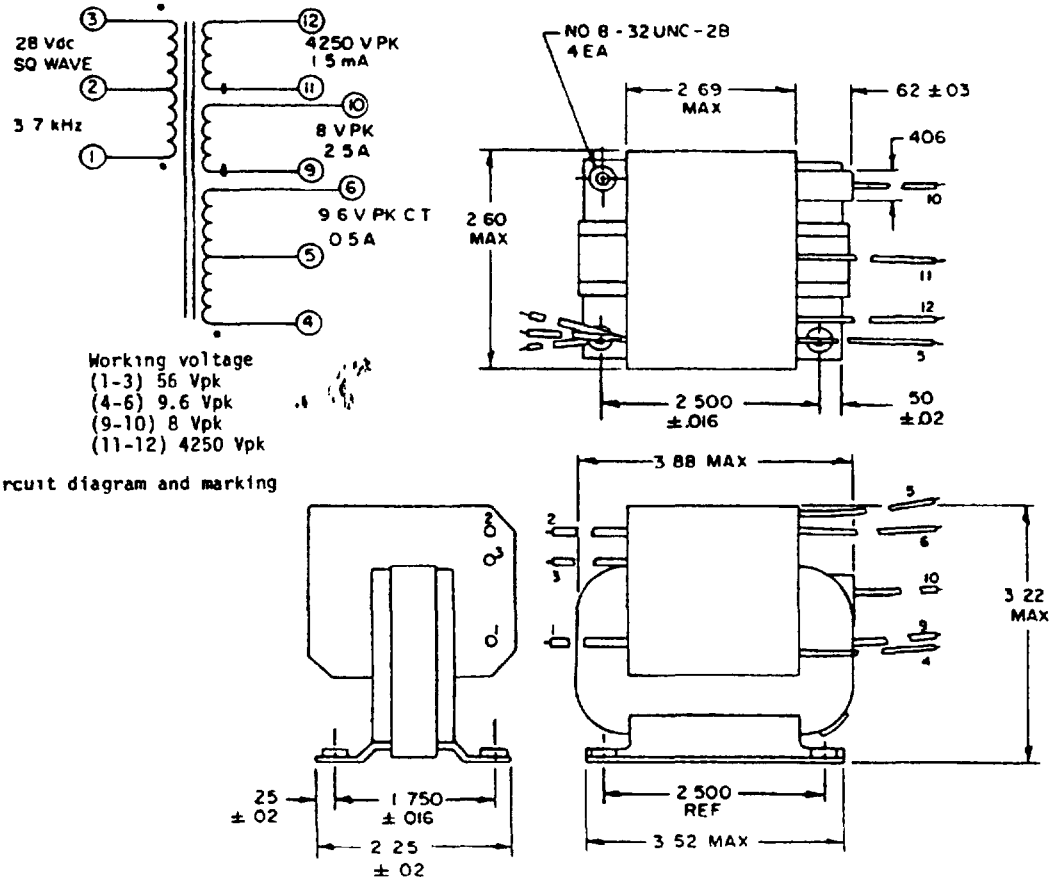
MILITARY SPECIFICATION SHEET

TRANSFORMER, POWER, STEPDOWN AND STEP-UP, TYPE TF5S03ZZ

Ⓐ Inactive for new design after the date of this specification.

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-T-27.



Circuit diagram and marking

FIGURE 1. Dimensions and configurations.

Ⓐ denotes changes

Inches	mm	Inches	mm
.016	0.41	2.25	57.2
.02	0.5	2.500	63.5
.03	0.8	2.60	66.0
.25	6.4	2.69	68.3
.406	10 31	3.22	81.8
.50	12.7	3.52	89.4
.62	15.7	3.88	98.6
1.750	44.45		

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Marking shall be on the side of the case.

FIGURE 1. Dimensions and configurations - Continued.

REQUIREMENTS. (When numbers in parentheses, i.e., (1-3) are used, they indicate the winding and the extreme terminals of the windings.)

Electrical ratings: 3.7 kHz square wave.

Primary. (1-3): 56 V peak, 1.25 A, 35 volt-amperes.

Secondary:

(4-6): 9.6 V peak, 0.5 A rms.
(9-10): 8 V peak, 2.5 A.
(11-12): 4,250 V peak, 1.5 mA.

Working voltage:

(1-3). 56 V peak.
(4-6): 9.6 V peak, 0.5 A rms.
(9-10): 8 V peak, 2.5 A.
(11-12): 4,250 V peak, 1.5 mA.

Design and construction:

Dimensions and configuration. See figure 1.

Duty cycle: Continuous.

Case: Encapsulated.

Material: Epoxy.

Terminals: Flex leads in accordance with MIL-W-81044.

(1-3): M81044/6-20-* or equal. 1/
(4-6), 11 and 12: M81044/6-18-* or equal. 1/
(9 and 10): M81044/6-18-* or equal. 1/

Height:

(1). 10 inches, minimum.
(2). 9.5 inches, minimum.
(3): 11 inches, minimum.
(4-9): 6.50 inches, minimum.
(10) 7 inches, minimum.
(11). 4.5 inches, minimum.
(12). 5.5 inches, minimum.

Weight: 2.5 pounds maximum.

Operating temperature range. -55°C to +130°C.

Altitude. 10,000 feet maximum.

Terminal strength: MIL-STD-202, method 211, test condition A, 2 pounds.

1/ * Asterisks shall be replaced by color code designators in accordance with MIL-STD-681.

Dielectric withstanding voltage (each winding):

At sea level:

11-9, 1, 4, and GND: 17.7 kV rms.
9-11: 13.4 kV rms.
1-4 and GND: 350 V.

Electrical characteristics: 2/

No load: With 28 volts rms, 3.7 kHz across (1-2), the current in (1-2) shall not exceed 400 mA rms and the power in (1-2) shall not exceed 11.2 watts.

Voltage across:

(1-3) .57 V ±5 percent.
(4-6): 0.102 V ±5 percent.
(9-10): .081 V rms ±2.5 percent.

Rated load. With 56 V peak, 3.7 kHz across (1-3), and the rated current on all secondaries.

Voltage across

(4-5): 4.8 V peak ±5 percent.
(5-6) 4.8 V peak ±5 percent.
(9-10). 8 V peak ±5 percent.
(11-12): 8,500 V peak ±3 percent.

DC resistance:

(1-3): 0.163 to 0.22 ohms.
(4-6): 0.19 to 0.267 ohms.
(9-10): 0.016 to 0.0265 ohms.
(11-12): 2.2k to 3.105k ohms.

Polarity Additive with terminals 3 and 4 connected and terminals 3 and 11 connected (3 and 9 connected).

Temperature rise: 50°C with 56 V, 3.7kHz across (1-3) at an ambient temperature of 80°C. Full load terminals are (4-6), (9-10), and (11-12).

Ⓐ Quality assurance provisions:

Qualification inspection: Not applicable.

Quality conformance inspection. Groups A and B tests of MIL-T-27 shall be applicable.

Marking location: See figure 1.

Part number: M27/265-01.

2/ Apply 45 V, 400 Hz sinusoidal voltage to terminals 11 and 12 to verify the turns ratio. Turns ratio must not deviate more than 5 percent from calculated value.

CONCLUDING MATERIAL

Custodians
Army - ER
Navy - EC
Air Force - 85

Review activities:
Army - MI
Navy - OS, SH
Air Force - 17, 99
DLA - ES

User activities:
Army - ME
Navy - AS, MC
Air Force - 19

Preparing activity.
Army - ER

Agent.
DLA - ES

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